REMARKS

The Office Action dated November 1, 2004 has been received and carefully noted. The following remarks are submitted as a full and complete response thereto.

In accordance with the foregoing, claims 1, 5, 12, 16, 23, and 27 have been amended to improve clarity of the features recited therein and claims 3, 14, and 25 have been cancelled, without prejudice or disclaimer. No new matter is being presented, and approval and entry are respectfully requested.

Claims 1-2, 4-13, 15-24, and 26-33 stand rejected and pending and under consideration.

REJECTION UNDER 35 U.S.C. § 102:

In the Office Action, at page 2, item numbered 2, claims 1, 2, 6, 12-13, 17, 23-24, and 28 are rejected under 35 U.S.C. § 102 as anticipated by U. S. Patent No. 6,151,324 to Belser ("Belser"). The Office Action took the position that Belser describes all the recitations of independent claims 1, 12, and 23 and related dependent claims. This rejection is traversed and reconsideration is requested.

Independent claim 1, upon which claims 2 and 6 are dependent, recites a method for encapsulating and decapsulating information into a data packet being transmitted through a plurality of switches. The method includes the steps of: receiving a data packet in a first switch for transmission to a second switch; encapsulating information into a field of said data packet so that said information, when encapsulated into said data packet, does not increase the size of said data packet; transmitting said data packet having said information encapsulated in said data packet to said second switch; receiving said data packet having said information encapsulated in said data packet in said second switch; and decapsulating said information encapsulated in said data packet, wherein said

step of encapsulating encapsulates said information by performing an XOR function where said data packet is XORed with said information.

Independent claim 12, upon which claims 13 and 17 are dependent, recites a system for encapsulating and decapsulating information into a data packet being transmitted through a plurality of switches. The system includes a first switch comprising: a transmitter, and an encapsulating module that encapsulates information into a field of a data packet so that said information, when encapsulated into said data packet, does not increase the size of said data packet. The system also includes a second switch comprising: a receiver, wherein when said transmitter of said first switch transmits said data packet having said information encapsulated in said data packet to said receiver of said second switch, wherein said receiver of said second switch receives said data packet having said information encapsulated in said data packet; and a decapsulating module that decapsulates said information encapsulated in said data packet to determine said information encapsulated in said data packet, wherein said encapsulating module encapsulates said information by performing an XOR function where said data packet is XORed with said information.

Independent claim 23, upon which claims 23 and 28 are dependent, recites a switch for encapsulating and decapsulating information into a data packet. The switch includes a transmitter that transmits data packets, an encapsulating module that encapsulates information into a data packet before said transmitter transmits said data packet, a receiver for receiving transmitted data packets, and a decapsulating module that decapsulates information from said transmitted data packets received by said receiver, wherein said encapsulating module encapsulates said information by performing an XOR function where said data packet is XORed with said information.

As will be discussed below, the cited prior art of Belser fails to disclose or suggest the elements of any of the presently pending claims.

Belser generally describes a method and apparatus for connection-oriented switching in a communications network wherein a pre-established path is established

between a select pair of an ingress switch and an egress switch. Destination address (DA) and source address (SA) fields in a MAC frame packet are replaced with the virtual path ID, the virtual circuit ID is inserted in a VLAN-ID field, and a packet identifier marking as an aggregated packet is added to create a modified packet which is then sent on the pre-established path to the egress switch. See column 2, lines 37-49. In the description of Belser, a MAC frame data packet is modified to enable switching along the pre-established path. The "MAC frame" packet is a connectionless packet and generally contains the following fields: preamble; start frame delimiter; destination address; source address; type/length field; payload (i.e., data and padding); and frame check sequence. See column 4, lines 6-20.

However, Belser fails to teach or suggest encapsulating "information into a field of said data packet so that said information, when encapsulated into said data packet, does not increase the size of said data packet," as recited in independent claims 1 and 12. Although Belser provides that the field may be modified to add information by overlaying the new data in a field, Belser does not teach or suggest whether such overlaying is performed without increasing the size of the data packet and does not teach or suggest how the overlay is performed to avoid increasing the size of the data packet. For instance, Belser is silent as to teaching or suggesting that the encapsulating of the information into the field of the data packet is performed by "an XOR function where said data packet is XORed with said information," as recited in independent claims 1 and 12. Belser is devoid of any description providing an XOR function to encapsulate the new data into the field.

Independent claim 23 recites, "said encapsulating module encapsulates said information by executing an XOR function where said data packet is XORed with said information." Because independent claim 23 includes similar claim features as those recited in independent claim 1, although of different scope, and because the Office Action refers to similar portions of the cited references to reject independent claim 23,

the arguments presented above supporting the patentability of independent claim 1 are incorporated herein to support the patentability of independent claim 23.

Accordingly, in view of the above, Applicant respectfully submits that independent claims 1, 12 and 23 and related dependent claims each recite subject matter which is neither taught nor suggested in Belser. It is respectfully requested that independent claims 1, 12, and 23 and related dependent claims be allowed.

In the Office Action, at page 3, item numbered 3, claims 1, 12, and 23 are rejected under 35 U.S.C. § 102 as anticipated by U. S. Patent No. 5,751,723 to Vanden Heuvel ("Vanden Heuvel"). The Office Action took the position that Heuvel describes all the recitations of independent claims 1, 12, and 23. This rejection is traversed and reconsideration is requested.

As will be discussed below, Vanden Heuvel fails to disclose or suggest the elements of any of the presently pending claims.

Applicant respectfully submits that on page 5 of the Office Action, it is correctly recognized that Vanden Heuvel fails to teach or suggest, "said step of encapsulating encapsulates said information by performing an XOR function where said data packet is XORed with said information," as recited in independent claim 1. Further, the Office Action correctly recognized that Vanden Heuvel fails to teach or suggest, "encapsulating module encapsulates said information by performing an XOR function where said data packet is XORed with said information," as recited in independent claims 12 and 23.

Accordingly, Applicant respectfully submits that independent claims 1, 12 and 23 each recite subject matter which is neither taught nor suggested in Vanden Heuvel. It is respectfully requested that independent claims 1, 12, and 23 be allowed.

REJECTION UNDER 35 U.S.C. § 103:

In the Office Action, at page 4, item numbered 6, claims 8-9, 11, 19-20, 22, 30-31, and 33 are rejected under 35 U.S.C. § 103 as being unpatentable over Belser. The Office Action took the position that Belser discloses all the aspects of dependent claims 8-9, 11, 19-20, 22, 30-31, and 33. The rejection is traversed and reconsideration is requested.

Dependent claims 8-9 and 11 depend from independent claim 1, dependent claims 19-20 and 22 depend from dependent claim 12 and dependent claims 30-31 and 33 depend from independent claim 23. Because Belser must describe all the recitations of the corresponding independent claims, the arguments presented above supporting the patentability of independent claims 1, 12, and 23 over Belser are incorporated herein.

In addition, on page 4 of the Office Action, item numbered 6, it is conclusively contended that "Belser discloses a packet including a FCS. Therefore, it would have been obvious to one of ordinary skill in the art to implement the step of determining if an error occurred in the transmission of said data packet by performing error checking to determine if the received data packet contains any error." Applicant respectfully traverses such contention.

For instance, dependent claim 8 recites, "performing a Cyclic Redundancy Check on said data packet to determine if there was an error in transmitting said data packet." It is improper to conclusively assert that because Belser generally describes FCS or Frame Check Sequence, the reference also provides for a Cyclic Redundancy Check (CRC). In addition, dependent claim 11, for instance, recites, "determining an error occurred in the transmission of said data packet if said information encapsulated in said data packet cannot be identified in a decode code book." However, Belser does not broach the concept of identifying the data packet in a decode code book.

It is improper to interpret the claims by including features that are not recited in such claims. Different from the CRC, the FCS generally provides a check value computed for the bits in a frame to help determine if a transmission error has occurred.

Thus, contrary to the contentions made in the Office Action, Belser fails to teach or suggest the recitations provided in the pending claims.

Accordingly, Applicant respectfully submits that independent claims 1, 12 and 23 and related dependent claims each recite subject matter which is neither taught nor suggested in Belser. It is respectfully requested that independent claims 1, 12, and 23 and related dependent claims be allowed.

In the Office Action, at page 5, item numbered 7, claims 3-5, 7-10, 14-16, 18-21, 25-27, and 29-32 are rejected under 35 U.S.C. § 103 as being unpatentable over Vanden Heuvel and U. S. Patent No. 6,609,226 to Figueira et al. ("Figueira"). The Office Action took the position that Belser discloses all the aspects of dependent claims 3-5, 7-10, 14-16, 18-21, 25-27, and 29-32. The rejection is traversed and reconsideration is requested.

Dependent claims 4-5 and 7-10 depend from independent claim 1, dependent claims 15-16 and 18-21 depend from dependent claim 12 and dependent claims 26-27 and 29-32 depend from independent claim 23. Thus, Vanden Heuvel and Figueira, individually or combined, must describe all the recitations of independent claims 1, 12, and 23.

As will be discussed below, the cited prior art of Vanden Heuvel and Figueira fail to disclose or suggest the elements of any of the presently pending claims.

Vanden Heuvel generally describes a system and method include monitoring each message packet to determine a packet type identifier, and interleaving a portion of background data (i.e., additional revenue generating data) into the unused or reserved bit locations to form an enriched message packet. As previously noted, the Office Action has correctly recognized that Vanden Heuvel fails to teach or suggest, "said step of encapsulating encapsulates said information by performing an XOR function where said data packet is XORed with said information," as recited in independent claim 1. Further, the Office Action correctly recognized that Vanden Heuvel fails to teach or suggest, "encapsulating module encapsulates said information by performing an XOR function

where said data packet is XORed with said information," as recited in independent claims 12 and 23. Accordingly, the Office Action relies on Figueira as providing such recitations.

Figueira generally provides a networking device including error detection to determine whether the transmission of data occurred without any errors. See column 3, lines 60-66. One error detection technique uses a standard cyclic redundancy check (CRC) function. Prior to transmission, the CRC function modifies a transmitted message so that it is always divisible (modulo 2) by a predetermined CRC polynomial at the second networking (receiver) device.

However, similarly to Vanden Heuvel, Figueira is silent as to teaching or suggesting, "encapsulating information into a field of said data packet so that said information, when encapsulated into said data packet..., wherein said step of encapsulating encapsulates said information by performing an XOR function where said data packet is XORed with said information," as recited in independent claim 1. Rather, Figueira limits its description by providing that a most significant bit of a shift register 610 is loaded into a first input of a logic gate 620 (e.g., Exclusive-OR "XOR") for a scrambling operation. See Fig. 6 and column 4, lines 43-47. Further, at each CLK2 cycle, a most significant bit of the shift register 710 is loaded into a first input of logic gate 720 (e.g., exclusive-OR "XOR") for a descrambling operation. See Fig. 7 and column 4, lines 60-65.

Figueira does not broach the concept of encapsulating information so as not to increase the size of a data packet, where the data packet is XORed with the information. Rather, Figueira provides an XOR condition where a significant bit is loaded into an input of a logic gate. Thus, Vanden Heuvel and Figueira fail to teach or suggest all the recitations of independent claim 1.

Thus, if Figueira and Vanden Heuvel are combined, the combination would provide a system for interleaving a portion of background data into unused or reserved bit locations where a most significant bit of a shift register would be loaded into a first input

of a logic gate (e.g., Exclusive-OR "XOR") for a scrambling operation. However, if the most significant bit is already used, the error detection of Figueira would fail. As indicated in MPEP 2143.01, if a proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. Accordingly, it is respectfully asserted that it is improper to combine Figueira and Vanden Heuvel and that a combination of both references fails to teach or suggest all the recitations of independent claim 1.

For similar reasons, Figueira and Vanden Heuvel fail to teach or suggest, "encapsulating module encapsulates said information by performing an XOR function where said data packet is XORed with said information," as recited in independent claims 12 and 23.

Accordingly, Applicant respectfully submits that independent claims 1, 12 and 23 each recite subject matter which is neither taught nor suggested in Figueira and Vanden Heuvel. It is respectfully requested that independent claims 1, 12, and 23 be allowed.

CONCLUSION:

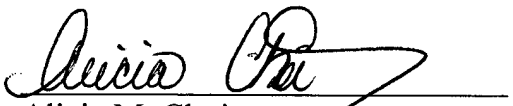
In view of the above, applicant respectfully submits that the claimed invention recites subject matter which is neither disclosed nor suggested in the cited prior art. Applicant further submits that the subject matter is more than sufficient to render the claimed invention unobvious to a person of skill in the art. Applicant therefore respectfully requests that each of claims 1-2, 4-13, 15-24, and 26-33 be found allowable and this application passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicant's undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicant respectfully petitions for an appropriate extension of time.

Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,



Alicia M. Choi
Registration No. 46,621

Customer No. 32294
SQUIRE, SANDERS & DEMPSEY LLP
14TH Floor
8000 Towers Crescent Drive
Tysons Corner, Virginia 22182-2700
Telephone: 703-720-7800
Fax: 703-720-7802

AMC:jf